

# Weekly Report

2017.11.20-2017.11.26

## 1.This Week

### Summarization Form

Task	Progress	Time
Waveline	Paper: revise the paper.	Prepare to submit
Power Grid New Projects	Process the raw data of transient simulation results. Get the program to generate power flow iteration data.	February
Power Grid Visualization Survey	Gathering materials.	
VIS 2018 paper (based on SQC idea)	Idea evaluation.	4.1

### Wavelines

- 1.Revise the paper: make final revisions of the paper, video, and pictures. Zhang Wei is still revising the pictures in the paper. Once she finished revising the pictures, the paper is ready to submit.
- 2.Make final revisions of the summarization material and send it Huang.

### SQC paper

- 1.Reading survey papers of anomaly detection and anomaly detection visualizations. It is found that SQC is considered as typical statistical anomaly detection method in survey works.
- 2.Realize the one class SVM anomaly detection method (it's based on classification). Plan to pick one method from different types of anomaly detection methods as comparison baselines, including knn based method, statistical based method, clustering based method, classification based method etc..
- 3.Ask Guo Fangzhou for the air quality data. Prepare to test the anomaly detection methods on this data set.

## **Power Flow Project in Ningbo**

1. Solve the problem found during data processing and process with the binary-coded data file of all samples.
2. Dr. Huang gives the power flow calculation program and we're now able to generate power flow intermediate data by ourselves.
3. The power flow result visualization is started first (because we still need to generate power flow intermediate data). The back-end group is dealing with binary data file and extract the topology from the data. The front-end group is realizing the topology layout (HOLA) and learning basic visualization forms like the heat map.

## **Papers**

1. **Anomaly Detection: A Survey**
2. **Voila: Visual Anomaly Detection and Monitoring with Streaming Spatiotemporal Data**
3. **Lof: identifying density-based local outliers.**
4. **One-class svm for learning in image retrieval.**

## **2.TODO**

1. other projects of power grid started.
2. VIS 2018 paper idea evaluation.